

## CLAIMS

1. A crystal monochromator, comprising first and second crystal elements, having respective first and second crystal  
5 spacings chosen so that the crystal elements diffract radiation incident thereon at respective first and second wavelengths at a selected Bragg angle, the crystal elements having a curvature chosen so as to focus the radiation at the first and second wavelengths to a common focal area.  
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2. A monochromator according to claim 1, wherein the first and second crystal elements comprise first and second crystals having respective front surfaces with the chosen curvature, positioned side by side so that the front surfaces define a  
15 common curve.
3. A monochromator according to claim 1, wherein the first crystal element comprises a bulk crystal having a front surface with the chosen curvature, and the second crystal  
20 element comprises a thin layer formed on the front surface of the first crystal element.